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08/950,760	10/15/97	WOLLRATH	A 06502.0063-0

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EXAMINER

CHERUBIN, Y

ART UNIT

PAPER NUMBER

2755

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/950,760

Applicant(s)
Wollrath et al.

Examiner
Yveste Cherubin

Group Art Unit
2755



☒ Responsive to communication(s) filed on Oct 15, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-27 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-27 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

2. Claim 22 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Bezviner.

As to claim 22, Bezviner teaches the step of:

- receiving a request to access the remote object (col 5, lines 7 - 11).
- determining whether the remote object is active (col 7, lines 38 - 64).
- accessing the remote object based on the results of the determination (col 7, lines 38 - 67)(col 8, lines 1- 14).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. **Claims 1, 3, 4, 6, 23 - 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bezviner in view of Vanderbilt.

As to **claim 1**, Bezviner teaches

- calling the remote object using a first address in a faulting remote reference to the remote object when the reference refers to an active instance of the remote object (col 2, lines 40 - 59)
- calling an activator object using a second address in the faulting remote reference to perform activation of the remote object when the reference to the remote object refers to a null instance of the remote object (col 2, lines 40 -59)(col 15, lines 19 - 43).

However, Bezviner does not explicitly teach the step wherein the reference to the remote object refers to a null instance of the remote object.

Vanderbilt teaches the step of returning a null reference (col 15, lines 19 - 42)..

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to improve upon the system taught by Bezviner by implementing the improvements detailed above because it would provide the system taught by Bezviner with the enhanced capability of returning a null result when no match has been found.

As to **claim 3**, Vanderbilt teaches the step of updating the faulting remote reference when a new version of the faulting remote reference is received from a computer associated with the remote object (col 12, lines 25 - 41).

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As to **claim 23**, Vanderbilt teaches a method wherein the determining step includes the substep of maintaining a faulting remote reference to the remote object (col 9, lines 8 - 32).

As to **claim 24**, Vanderbilt teaches a method wherein the determining step includes the substep of maintaining a faulting remote reference to the remote object, and when the faulting remote reference indicates that the remote object is active, the accessing step includes the substep of directly contacting the remote object (col 11, lines 30 - 67)(col 12, lines 1 - 9).

As to **claim 25**, Vanderbilt teaches a method wherein the determining step includes the substep of maintaining a faulting remote reference to the remote object, and when the faulting remote reference indicates that the remote object is not active, the accessing step includes the substep of instantiating the remote object (col 11, lines 30 - 67)(col 12, lines 1 - 9).

As to **claim 26**, Vanderbilt teaches a method wherein the instantiating step includes the substep of determining whether a virtual machine for the remote object is active (col 11, lines 66 - 67)(col 12, lines 1- 59).

As to **claim 27**, Vanderbilt teaches a method wherein the virtual machine for the remote object is not active, the instantiating step further includes the step of spawning a new virtual machine for the remote object (col 11, lines 66 - 67)(col 12, lines 1- 59).

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5. Claims 2, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bezviner in view of Vanderbilt and further in view of Holmes

As to **claim 2**, Bezviner teaches the step of calling an activator object using the second address performed transparently to the process (col 4, lines 52 - 65).

However, Bezviner and Vanderbilt do not explicitly disclose the following additional limitations: "accessing an interface to call the remote object such that the steps of calling the remote object directly using the first address".

Holmes teaches the step of accessing an interface to call the remote object such that the steps of calling the remote object directly using the first address and calling an activator object using the second address are performed transparently to the process (col 3, lines 55 - 67)(col 4, lines 1 - 36).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to improve upon the system taught by Bezviner and Vanderbilt by implementing the improvements detailed above because it would provide the system taught by Bezviner and Vanderbilt with the enhanced capability of providing a communications system that facilitates exchange of data between a first computer and a second computer connected in a network to operate in a client/server arrangement.

6. **Claims 7 - 8, 12 - 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmes in view of Bezviner.

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As to **claim 7**, Holmes teaches :

- receiving a call to activate the remote object (col 10, lines 5 - 14)
- determining whether a first predefined group of objects corresponding to the called remote object is active (col 10, lines 5 - 14)

However, Holmes does not explicitly teach the following limitations:

- activating the remote object within the first group when the determining step determines that the first group is active.
- creating a second group of objects and activating the remote object within the second group when the determining step determines that the first group is not active.

Bezviner teaches:

- activating the remote object within the first group when the determining step determines that the first group is active (col 9, lines 41 - 62)(col 10, lines 1 - 13).
- creating a second group of objects and activating the remote object within the second group when the determining step determines that the first group is not active (col 39 - 40/(page 15) - Creating remote objects).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to improve upon the system taught by Holmes by implementing the improvements detailed above because it would provide the system taught by Holmes with the enhanced capability of informing that the server process is ready for communications.

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As to **claim 8**, Bezviner teaches the step of activating the object within the first group further includes the step of activating the object within an address space of previous objects activated within the first group (col 2, lines 40 - 59).

7. **Claims 9 - 11, 14 - 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmes in view of Bezviner and Vanderbilt.

As to **claim 9**, Bezviner teaches the step of activating the remote object within the first group further includes the step of activating the object within the same Java virtual machine as previous objects activated within the first group (col 2, lines 40 - 59).

However Bezviner does not explicitly activate the object within the same Java virtual machine as previous activated within the first group.

Vanderbilt teaches the step of activating the object within the same Java virtual machine (col 9, lines 55 - 67)(col 10, lines 1 - 46)

As to **claim 10**, Vanderbilt teaches the step of creating the second group includes spawning a virtual machine to interpret the second group (col 11, lines 66 - 67)(col 12, lines 1- 59).

As to **claim 11**, Bezviner teaches the step of returning results of the activated remote object (col 4, lines 60 - 67).

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8. **Claims 17 - 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinman in view of Holmes and Bezviner.

As to **claim 17**, Kleinman teaches:

- a first computer executing a proxy object called by a process and instantiated as one of the plurality of different implementations depending on the process call (col 7, lines 33 - 59).
- a second computer receiving requests for remote objects from the first computer and executing an object activator (col 7, lines 33 - 59).

However, Kleinman does not explicitly teach the following limitations:

- 1) determining whether a first predefined group of objects corresponding to the requested remote object is active
- 2) activating the requested remote object within the first group of objects when the determining step determines that the first group of objects is active
- 3) creating a second group of objects and activating the requested remote object within the second group of objects when the determining step determines that the first group of objects is not active

Holmes as modified above teaches:

- 1) determining whether a first predefined group of objects corresponding to the requested remote object is active (col 10, lines 5 - 14).

Bezviner teaches:

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2) activating the requested remote object within the first group of objects when the determining step determines that the first group of objects is active (col 9, lines 53 - 62)(col 10, lines 1 - 13).

3) creating a second group of objects and activating the requested remote object within the second group of objects when the determining step determines that the first group of objects is not active (col 39 - 40/page 15 - Creating remote objects).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to improve upon the system taught by Kleinman by implementing the improvements detailed above because it would provide the system taught by Kleinman with the enhanced capability of informing that the server process is ready for communications.

As to **claim 18**, Kleinman teaches the plurality of different implementations (multiple implementations) of the proxy object form an interface (object's interface) such that details of the remote object call are hidden (no detailed knowledge) from the calling process (col 2, lines 32 - 48)

9. **Claims 19 - 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinman in view of Holmes and Bezviner and further in view of Vanderbilt.

As to **claim 19**, Bezviner teaches a system wherein the proxy object further includes means for calling the remote object directly using a first address in a faulting remote reference to the remote

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object when the reference refers to an active instance of the remote object (col 5, lines 31 - 67)(col 6, lines 1 - 23)

Vanderbilt as modified above teaches the means for calling the activator object using a second address in the faulting remote reference when the reference refers to a null instance of the remote object (col 13, lines 19 - 67)(col 14, lines 1 - 29).

As to **claim 20**, Vanderbilt teaches a system wherein the proxy object is a process executing on a virtual (C++ virtual function) machine (col 10, lines 25 - 44).

As to **claim 21**, Vanderbilt teaches a system wherein the object activator is a process executing on a virtual (implemented in C++ function) machine (col 11, lines 10 - 29)

As to **claims 4 - 6**, refer to claims 1 - 3 respectively for rejection.

As to **claims 12 - 16**, refer to claims 7 - 11 respectively for rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Yveste Cherubin** whose telephone number is **(703) 306-3027**. The examiner can normally be reached on **Monday - Friday from 8:30 AM to 6:00 PM**.

The fax phone number for the organization where this application or proceeding is assigned is **(703) 308-5359**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is **(703) 305-9600**.

Y.C./Y.C.

December 18, 1998



**ALVIN E. OBERLEY
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